D. Remarks

Objections to the Specification

The Specification has been amended to address the stated objections.

Objections to Claims.

Claim 10 has been amended to address the claim objection.

Rejections Under 35 U.S.C. §112, First Paragraph.

The rejections of claims 1 and 11 will first be addressed.

Claims 1 and 11 have been amended to address one part of this ground for rejection. The term "analog" has been struck from each claim.

The Specification provides support for the remaining limitations of claim 1. In particular, amended claim 1 recites "said plurality of telephone wires connected together to provide a telephone network in which only one phone connected to the telephone network can communicate on a given line at one time."

Applicant's specification describes the arrangement of telephone service wiring present in homes and buildings:

> There are large number of homes and buildings that have been wired for telephone service, and the wiring usually can only accommodate one or two phone lines. Attached to these phone lines can be several phones, ***but only one phone per line can be in use on separate conversations at one time.*** Also unless a calling phone is on one line and the receiving phone is on another line, communication between the two phones cannot be accomplished.[1]

The present invention clearly utilizes such existing phone wiring.

> A home voice and data network (HVDN) of the present invention adapts to the existing telephone lines without any rewiring...[2]

[1] Applicant's Specification, Page 2, Line 20 to Page 3, Line 2, emphasis added.
[2] Applicant's Specification, Page 3 Lines 11-14.

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> A plurality of voice and data modules (VDM) 21 are connected to telephone wiring 22 in a house or building.[3]

Accordingly, with respect to Applicant's claim 1 limitation directed to "a telephone network in which only one phone connected to the telephone network can communicate on a given line at one time", this ground for rejection is traversed.

> The rejection of claim 3 will now be addressed.
>
> Claim 3 has been amended to address this ground for rejection.

Rejections Under 35 U.S.C. §112, Second Paragraph.

> The rejection of claim 1 will first be addressed.
>
> Applicant has amended claim 1 to address the ground for rejection.
>
> At the same time, Applicant wishes to clarify a possible misconception regarding the invention and technology. The rejection of claim 1 makes the following statements regarding the invention.

> In fact, the present invention does not even use an *analog* telephone network to process the telephone calls. As shown in figure 2a, the calls are sent over line 22 using an Ethernet protocol, which is a digital communications protocol.

> The above is believed to be an unduly limiting statement regarding the invention.
>
> First, the invention can and is intended for use with an existing analog telephone network. This is an important feature of the invention. The application stresses this:

> This invention relates to communications networks... within a house, an office or a building using ***existing telephone lines***...[4]

> The present invention provides a means by which the existing wiring in a home or building can be used as a voice and data network... [T]he present invention adapts

[3] Applicant's Specification, Page 9, Lines 4-5.
[4] Applicant's Specification, Page 1, "Field of the Invention", emphasis added.

to ***the existing telephone lines without any rewiring...***[5]

The HVDN network... can allow any phone within the HVDN network to communicate with any or all phones within the network while using ***the existing telephone wiring within a home or building...***[6]

A plurality of voice and data modules (VDM) 21 are connected to the ***telephone wiring 22*** in a house or building.[7]

A connection of a VDM 21 to a telephone wiring 22 in a house or building will most likely be made at ***a wall connector originally used to provide a connection for a phone device...***

Thus, the Specification clearly indicates a telephone wiring 22 is an existing wiring. As previously noted, such an existing wiring is also clearly described:

There are large number of homes and buildings that ***have been wired*** for telephone service, and the wiring usually can only accommodate one or two phone lines. Attached to these phone lines can be several phones, but only one phone per line can be in use on separate conversations at one time...[8]

It is believed that one skilled in the art would clearly understand the above describes an analog phone network that exists in a great number of homes, buildings and offices.

Second, the statement regarding a perceived incompatibility between a protocol (e.g., Ethernet) and a wiring type (telephone wiring) requires clarification/correction. While an Ethernet protocol is a digital communications protocol, **protocols and media are two different items**. An analog telephone network (i.e., the typical *existing* wiring of a house/building for handling a single conventional voice conversation at one time) is intended for analog voice signals. However, a medium (e.g., a wiring), can carry all sorts of signals, both analog and/or

[5] Applicant's Specification, Page 3, Lines 8-13, emphasis added.
[6] Applicant's Specification, Page 7, Lines 5-8, emphasis added.
[7] Applicant's Specification, Page 7, Lines 5-8, emphasis added.
[8] Applicant's Specification, Page 2, Lines 20-23, emphasis added.

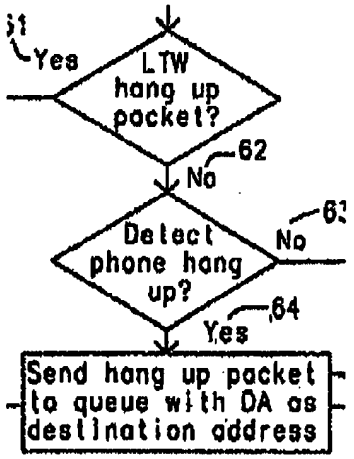
digital, and according a given protocol. A protocol dictates format/timing of a communication. As such, a protocol can be implemented across various media: network cabling (twisted pair, category 5 (CAT5) wiring) as well as wireless standards (e.g., Ethernet equivalent IEEE standards 802.11(a), (b) or (g)).

Accordingly, Applicant believe that the statements set forth in the rejection, that argue a digital protocol (Ethernet) is not compatible with a given medium (existing analog telephone network), is not correct, and should not be construed as restricting the scope/interpretation of Applicant's claims in any way.

The rejection of claim 13 will now be addressed.

Claim 13 has been amended to more clearly describe the invention. As amended, claim 13 recites that a hang up packet is being sent to queue. Further, such a hang up packet is sent (1) if a hang up is detected from the first phone and (2) a hang up packet from the LTW has not been detected. The LTW issues its own hang up packet in response to an outside phone.

Claim 13 is also supported by the Specification. One very particular, and hence not necessarily limiting, example of the method steps recited in claim 13 is shown the below excerpt of FIG 2a. Reference to such a particular example is believed to be helpful in understanding Applicant's claim 13 invention.



The rejection of claim 15 will now be addressed.

Claim 15 has been amended to address this ground for rejection. In particular, a request for connection is sent to a second VDM if an outgoing call is not an outside call.

Rejection of Claims 1-4, 11 and 12 Under 35 U.S.C. §102(b) based on *Baratz et al.* (U.S. Patent No. 5,742,596).

The invention of amended claim 1 is directed to a voice and data network that includes a telephone and a computer connected to a voice and data module (VDM). A plurality of the VDM devices are connected to a plurality of telephone wires in a building. The plurality of telephone wires are connected together provide a telephone network in which only one phone can communicate on a given line at one time in ordinary telephone service. The voice and data network also includes a link to wide area network (LTW) that connects the telephone network to a Public Service Telephone Network (PSTN) and an Internet Service Provider (ISP). The LTW and the plurality of said VDM devices communicate together over said telephone network using communication addresses assigned to said LTW and each VDM of said plurality of VMD devices

As is well known, a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single reference.

The cited reference *Baratz et al.* is not believed to show all elements of Applicant's claim 1 invention. In particular, *Baratz et al.* does not show voice and data modules connected to telephone wires, where such telephone wires provide telephone network that ordinarily accommodates single communication for a phone at a given time.

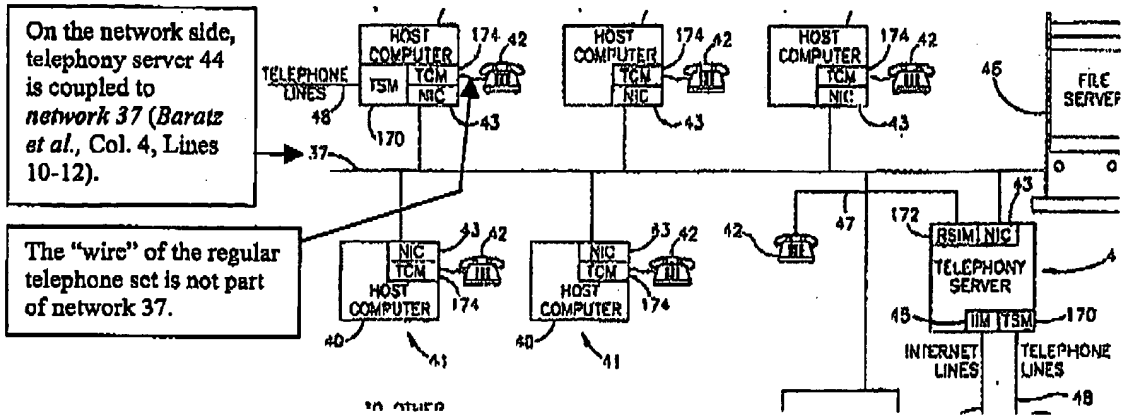
Baratz et al. does not show a network of telephone wires. *Baratz et al.* teaches a network 37, however such a network is formed from LAN cabling. Such LAN cabling is not composed of telephone wires.[9] To show such a telephone network, the rejection relies on the following reason.

> [T]elephone wires connected together provide a telephone network in which only one analog phone can communicate on a given line at a time (the connected wires comprise a network and specifically there is a wire attaching the phone 42 to the TCM 174 wherein only one that phone 42 can communicate at one time...)

However, in *Baratz et al.* the wire attaching the phone is not part of the network. *Baratz et al.* identifies its network by item 37. In addition, *network* interface cards (NICs) are provided to

[9] *Baratz et al.*, Col. 5, Lines 18-30.

connect to such a network. The following excerpt from FIG. 1 of *Baratz et al.* emphasizes the "telephone wires" noted in the rejection are not part of a network.



Still further, *Baratz et al.* would seem to teach away from Applicant's invention by having telephones lines (48) intentionally outside of the network 37. That is, the network is intended to connect to telephone lines (48) via special hardware (NIC 43/telephony server module 170), as opposed to including such telephone lines (48) as part of the network.

Accordingly, because the cited reference does not show all limitations of amended claim 1, this ground for rejection is traversed.

Various claims depending from claim 1 are believed to be separately patentable over the cited art.

Amended claim 11 recites that each VDM device is connected to the telephone wires, which form the telephone network per claim 1, by a connector originally used to provide a phone connection. Such an arrangement is not shown in *Baratz et al.*

To show Applicant's VDM devices, the rejection relies on the following reasoning:

> Note, the NIC and TCM cards of the host computer, as a whole, are being considered a voice and data module...[10]

As illustrated by the above figure, the NIC/TCM combination is connected to the network by the NIC. The NIC is never described as having a connector originally used to provide a phone connection.

[10] See the Office Action, dated 3/8/04, Page 5, second full paragraph from the bottom.

For this additional reason, the rejection of claim 11 is traversed.

Amended claim 12 recites that each VDM has a telephone and computer connected thereto. Further, each telephone and computer has a unique address with respect to all other telephones and computers connected to the VDM modules. This limitation is not shown or suggested by the cited reference.

In *Baratz et al.*, host computers (40) are connected to network (37) by network interface cards (43). Phones (42) are connected to host computers (40) by telephony client module (174), or directly to network (37) by remote subscriber module (172).[11] Thus, in *Baratz et al.*, phones connect to a network through the NIC of the host computer. A software driver running on the host computer allows communication with the network.

> The software architecture for telephony clients 41 also includes a network services driver 162 for connecting the host PC to network 37. ***Driver 164 allows telephony client host based software to communicate with the telephony client module installed within its host computer.***[12]

In such an arrangement, voice packets for a given phone are directed to the physical address associated with the NIC. This is emphasized in the reference.

> The physical extension numbers are directly related to the ***unique network address of the host computer 40 that telephone set 42 is connected to.*** In a similar manner telephones connected to a remote subscriber interface module are assigned unique physical address.[13]

Thus, in *Baratz et al.* a telephone has the same network address as its host computer. This is in contrast to Applicant's claim 12, which recites different addresses for a computer and phone connected to a VDM.

For this additional reason, the rejection of claim 12 is traversed.

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[11] See *Baratz et al.*, FIG. 1.
[12] *Baratz et al.*, Col. 10, Lines 34-38, emphasis added.
[13] *Baratz et al.*, Col. 6, Lines 20-24.

Rejection of Claims 5-10 and 14-16 Under 35 U.S.C. §103(a), based on *Baratz et al.*

The rejection of claim 5 will first be addressed.

As is well known, to establish a prima facie case of obviousness, a rejection must meet three basic criteria. First, there must be some suggestion or motivation to modify a reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference(s) must teach or suggest all claim limitations.[14]

Claim 5 depends from claim 1. Thus, to the extent that this ground for rejection relies on *Baratz et al.* to show the limitations of claim 1, the comments set forth for claim 1 are incorporated by reference herein. In particular, *Baratz et al.* does not show or suggest VDM devices connected to telephone wires of a building.

In addition or alternatively, a prima facie case is not believed to have been established for claim 5, as the necessary motivation/suggest for the proposed combination is lacking.

Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found in either the references themselves or in the knowledge generally available to one of ordinary skill in the art.

The motivation set forth in the rejection of claim 5 is as follows:

> It would have been obvious... to have more than one telephony server module in Baratz because doing so has many benefits such as parallel processing wherein the processing power of more than one server can be used, thereby increasing the operating speed in the Baratz network and another benefit would be redundancy, wherein if one server fails there will be another server that can support the system, thereby making Baratz more reliable.[15]

Applicant respectfully requests the source for this motivation. It is not believed to be from the reference. *Baratz et al.* is silent as to parallel processing techniques and/or redundancy. If the examiner is taking official notice with respect to such a teaching, Applicant seasonably traverses this statement and requests the citation of references in support. Applicant notes that parallel processing typically requires a specialized operating system to manage different computing threads and ensure proper processing of instructions. Similarly, a redundant server

[14] MPEP §2143.
[15] Office Action, dated 03/08/04, Page 8, Lines 3-8.

typically requires specialized state management to ensure it tracks the server it replaces, and can accommodate instructions/packets that are "in transit" when the first server fails.

For these reasons, Applicant believes the requisite motivation for a prima facie case of obviousness is believed to be lacking. Accordingly, the rejection is traversed.

The rejection of claims 6-10 and 14-16 will now be addressed.

The invention of claim 6 is directed to a method for communicating between network elements in a voice and data network. The method includes (a) monitoring a communication network by a first voice and data module (VDM) for a call from a second VDM and a call from a link to a wide area network (LTW) connected to said communication network, (b) monitoring a first phone and a first computer attached to said first VDM for an outgoing call to a destination containing a second phone and a second computer connected to said second VDM, or an outside phone and an outside computer network through said LTW.

The method also includes (c) detecting said outgoing call and connecting said call if said destination is not busy, else providing a busy signal and disconnecting said outgoing call, connecting said call including sending a request for connection packet with an address for said LTW as the destination address, (d) detecting an incoming call and connecting said call if a receiving device comprising said first phone and said first computer is not busy, else sending back said busy signal and disconnecting said incoming call, and (e) disconnecting phone calls or computer calls when a phone hang up or a computer disconnect signal is detected and returning to monitoring said network for said incoming call.

As emphasized above, step (c) of Applicant's invention includes connecting a call, where such a connecting step includes sending a request for connection packet with an address for said LTW as a destination address. Such a limitation is not shown or suggested by the reference.

Baratz et al. describes operations for outgoing external calls.[16] However, the description notes a "communication" between a telephone server module (argued to correspond to Applicant's LTW) and a calling extension, and then packet communication between the two. There is never any request for communication packet, as recited in claim 6. Further, the reference appears silent as to any request operations, and hence cannot be suggestive of such a limitation.

Accordingly, because all limitations of the rejected claim are not shown or suggested by

[16] See *Baratz et al.*, Col. 6, Lines 7-15.

Baratz et al., a prima facie case of obviousness is not believed to have been established, and this ground for rejection is traversed.

In addition or alternatively, the reference is not believed to show or suggest the limitations set forth in step (e) of claim 6. The rejection admits that the limitations of step (e) are not explicitly shown in the reference.[17] However, Applicant believes that the limitations of step (e) are not suggested by the reference either.

As emphasized above, step (e) of claim 6 recites, in addition to disconnecting phone calls when a phone hang up is detected, disconnecting a computer call when a computer disconnect signal is detected. While *Baratz et al.* mentions call set up, status monitoring and tear down by operation of the telephony server only[18], the reference provides no teachings regarding computer calls in addition to phone calls. For this additional reason, the reference is not believed to show or suggest all limitations of claim 6.

Various claims depending from claim 6 are believed to be separately patentable over the cited art.

Claim 15 recites that a step (c) further includes sending a request for connection packet to a second VDM. Such a limitation is not shown or suggested by *Baratz et al.* In fact, the reference is believed to teach away from the limitations shown.

Baratz et al. teaches host computers with network interfaces and telephony client modules (NIC/TCM), argued to correspond to Applicant's VDMs. In addition, *Baratz et al.* teaches a telephony server argued to correspond to Applicant's LTW, not a VDM.[19] *Baratz et al.* never describes a request for connection packet, thus cannot be suggestive of such a limitation.

In addition, *Baratz et al.* clearly indicates that call initiation is never between one host computer and the other (i.e., between one VDM and another), but is restricted exclusively to the TCM:

> During operation of system 10, internal calls made from one extension to another extension ***involve the telephony server only for the call setup***, status monitoring and tear down of the call.[20]

[17] See the Office Action, dated 3/8/04, Page 9, Lines 7-11.
[18] See *Baratz et al.*, Col. 5, Lines 63-66.
[19] See the Office Action, dated 3/8/04, Page 3.
[20] *Baratz et al.*, Col.5, Lines 63-66, emphasis added.

For this reason, the reference is believed to teach away from Applicant's invention, which presents device-to-device request for connection, as opposed to a centralized control of calling steps, as noted in *Baratz et al.*

Claim 16 recites that a step (d) further includes further includes an LTW requesting an outside call to provide extension data for an incoming call, and if an extension number is not received, storing a predefined port address as a destination address in request for connection packet. Such a limitation is not shown or suggested by *Baratz et al.*

The rejection admits that the reference does not show "if an extension number is not received, storing a predefined port address as a destination address in request for connection packet". To show such a limitation, the rejection proposes modifying *Baratz et al.* as follows:

> [I]t would have been obvious... to implement this feature in Baratz because doing so will allow the call to still take place rather than dropping the call because the extension is unknown, thus making Baratz more reliable. Note, this becomes even more important for emergency calls made in the Baratz system.[21]

Applicant respectfully requests a citation for the source of this motivation. It is not believed to be from the reference. *Baratz et al.* is silent as unknown extensions or emergency calls. If the examiner is taking official notice with respect to such teachings, Applicant seasonably traverses this statement and requests the citation of references in support.

Because the requisite motivation for the modification proposed by the rejection appears not to be based on teachings of the reference, such motivation is not sufficient for a prima face case of obviousness.

Rejection of Claim 13 Under 35 U.S.C. §103(a), based on *Baratz et al.* in view of *Angle et al.* (U.S. Patent 6,366,771)

To the extent that this rejection relies on *Baratz et al.*, the comments set forth above for claim 6 are incorporated by reference herein. In particular, various limitation of base claim 6 are not shown or suggested, thus a prima face case of obviousness does not exist.

[21] Office Action, dated 3/8/04, Page 11, Lines 18-22.

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Claims 1, 3, 10-11, 13 and 15 have been amended, not in response to the cited art, but to clarify claim terms and address objections/rejections related to form.

The present claims 1-16 are believed to be in allowable form. It is respectfully requested that the application be forwarded for allowance and issue.

Respectfully Submitted,

5/21/04

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